

CONTINUOUS CASTING METHOD FOR OBTAINING INGOT HAVING HIGH OXYGEN CONTENT

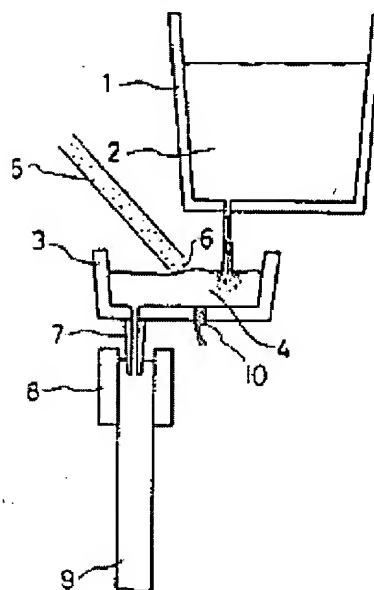
Patent number: JP62050054
Publication date: 1987-03-04
Inventor: OGUCHI SHIGERU; others: 02
Applicant: NIPPON STEEL CORP
Classification:
 - international: B22D11/10; B22D1/00; B22D11/06; B22D11/20; C21C7/00
 - european:
Application number: JP19850189407 19850830
Priority number(s):

Abstract of JP62050054

PURPOSE: To permit stable continuous casting of an ingot by charging a deoxidizing agent consisting of specific components to a molten steel in a tundish and stirring the molten steel with gas to adjust the concn. of the dissolved oxygen with regard to the carbon content thereby establishing a specified relation between a casting speed and ingot thickness.

CONSTITUTION: The deoxidizing agent 6 which consists essentially of Mn and/or Si such as metallic manganese and metallic silicon and is worked to a granular, powder or wire shape is charged into the molten steel 4 in the tundish 3 and the molten steel is stirred 10 with the gas. The deoxidizing agent 6 adsorbs the oxygen contained in the molten steel 4 without generating gaseous CD and pulverous and disperses the same uniformly into the molten steel 4. The oxygen content of the ingot 9 is made uniform in the upper and lower parts if the undeoxidized or weakly deoxidized molten steel 4 having ≥ 50 ppm dissolved oxygen concn. at $< 0.03(\%C)$ and $\geq 1.5(\%C)$ ppm dissolved oxygen concn. at $\geq 0.03(\%C)$ is cast at the relation between the casting speed V_c (m/min) and ingot quantity d (m) satisfying the equation. The short side thickness is made ≤ 90 mm in the case of horizontal rotary casting.

$$V_c / d^2 \geq 2.5 \quad (1/\text{m} \cdot \text{min})$$



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